

Notice of Allowability

Application No.

10/051,226

Examiner

Tom V. Sheng

Applicant(s)

LEE ET AL.

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 5/15/2006.
2. ☒ The allowed claim(s) is/are 1-16.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Michael F. Morano on 7/12/2006.

In the claims:

Claim 1 line 4, replace "a boundary pixel" with --boundary pixels--,

line 5, replace "a non-boundary pixel" with --non-boundary pixels--,

line 6, replace "pixel" with --pixels--,

line 9, replace "pixel" with --pixels--,

line 11, replace "pixel" with --pixels--,

line 13, replace "the boundary pixel" with --each boundary pixel--, and

line 15, replace "the non-boundary pixel" with --each non-boundary pixel--.

Claim 3 lines 2-3, replace "the pixel electrode" with --a pixel electrode--, and

line 3, replace "the boundary pixel" with --a boundary pixel--.

Claim 4 line 2, replace "the pixel electrode" with --a pixel electrode--, and

line 3, replace "the boundary pixel" with --a boundary pixel--.

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Claim 5 lines 2-3, replace "the pixel electrode" with --a pixel electrode--, and

line 3, replace "the boundary pixel" with --a boundary pixel--.

Claim 12 line 3, replace "a boundary pixel region" with --boundary pixel regions--,

lines 3-4, replace "a non-boundary pixel region" with --non-boundary pixel regions--,

line 7, replace "the boundary pixel region" with --each boundary pixel region--,

line 7-8, replace "the non-boundary pixel region" with --each non-boundary pixel region--.

Claim 15 line 2, replace "the boundary pixel" with "a boundary pixel".

Claim 16 line 2, replace "the boundary pixel" with "each boundary pixel", and

line 3, replace "a non-boundary pixel" with "each non-boundary pixel".

Allowable Subject Matter

2. Claims 1-16 are allowed.

3. The following is an examiner's statement of reasons for allowance:

The invention is directed to a thin film transistor liquid crystal display of a line inversion type for block-driving data lines provided to prevent a block defect due to the block-driving. The TFT-LCD includes an extension part overlapping with a pixel electrode of boundary pixels at a boundary data line applying a data signal to the boundary pixels.

Independent claim 1 recites the uniquely distinct features "a plurality of data lines formed corresponding to the pixel electrodes and comprising a boundary data line

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provided corresponding to the boundary pixels and a non-boundary data line different from the boundary data line corresponding to the non-boundary pixels; wherein the boundary data line has an extension part overlapping a portion of the pixel electrode corresponding to each boundary pixel, and the non-boundary data line does not include an extension part overlapping a portion of the pixel electrode corresponding to each non-boundary pixel.”

Independent claim 6 recites the uniquely distinct features “wherein the TFT-LCD further comprises at least one of the plurality of data lines having an extension part overlapping at least one of the plurality of pixel electrodes of a boundary pixel to substantially minimize a block defect.”

Independent claim 12 recites the uniquely distinct features “a plurality of data lines comprising a boundary data line overlapping the pixel electrode of each boundary pixel region and a non-boundary data line different from the boundary data line provided corresponding to each non-boundary pixel region.”

Song et al. (US 6,313,889 B1) teaches a TFT-LCD wherein each data line has a connect portion overlapping with each pixel electrode. Song’s “block” is limited to one data line. In other words, Song does not teach the above claimed non-boundary data lines and non-boundary pixels/pixel regions or the extension part overlapping the boundary pixels/pixel regions.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom V. Sheng whose telephone number is (571) 272-7684. The examiner can normally be reached on 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tom Sheng
July 13, 2006

AMR A. AWAD
PRIMARY EXAMINER
